

### REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed July 17, 2006 (Paper No. 20060710). Upon entry of this response, claims 38, 53-55, and 66-84 are pending in the application. Applicants respectfully request that there be reconsideration of all pending claims.

#### 1. Claim Objections

Claim 65 is objected to because it was omitted from the last response. Claim 65 was cancelled in the response to restriction requirement (filed May 11, 2006), but was inadvertently left out of the claim listing. Claim 65 is listed with status "Cancelled" in this response. Applicants therefore request that the objection be withdrawn.

#### 2. Rejection of Claims 38, 53-54, 71-73, 75-77, and 79-81 under 35 U.S.C. §103

Claims 38, 53-54, 71-73, 75-77, and 79-81 have been rejected under §103(a) as allegedly being obvious over *MacInnis et al.* (6,570,579) in view of *Boyce et al.* (5,614,952) and *Kalra et al.* (5,953,506). Applicants respectfully traverse this rejection. It is well established at law that, for a proper rejection of a claim under 35 U.S.C. §103 as being obvious based upon a combination of references, the cited combination of references must disclose, teach, or suggest, either implicitly or explicitly, all elements/features/steps of the claim at issue. See, e.g., *In re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988); *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981).

##### A. Claim 38

1) The proposed combination does not teach "transferring the set of retrieved reconstructed decompressed video data to a display device while downscaling the video picture in transit to the display device" as recited in claim 38

The Office Action alleges that this feature is disclosed by *MacInnis et al.* in Col. 5, lines 65-67, Col. 6, lines 1-9, and Figure 2, block 52. (Office Action, p. 3.) Applicants respectfully disagree. *MacInnis et al.* teaches:

The video scaler 52 may perform both downscaling and upscaling of digital video and analog video as needed. In the preferred embodiment, scale factors may be adjusted continuously from a scale factor of much less than one to a scale factor of four. With both analog and digital video input, either one may be scaled while the other is displayed full size at the same time as passthrough

video. Any portion of the input may be the source for video scaling. To conserve memory and bandwidth, the video scaler preferably downscales before capturing video frames to memory, and upscales after reading from memory, but preferably does not perform both upscaling and downscaling at the same time. (*MacInnis et al.*, Col. 5, line 65 to Col. 6, line 9, Emphasis added.)

In contrast to a downscaler that stores frames to memory, claim 38 recites “downscaling the video picture in transit to the display device”.

*Kalra et al.* contains no discussion at all of “downscaling”. *Boyce et al.* refers to downsampling rather than downscaling. Even assuming, *arguendo*, that downsampling is the same as downscaling, *Boyce et al.* further teaches that video frames are stored to memory after downscaling: “The output of the IDCT circuit 124 is coupled to the input of the downsampler 126. The downsampler 126 is used to downsample the data corresponding to each picture prior to storage in the frame buffer 118. As a result of the downsampling operation, the amount of data required to represent a video frame is substantially reduced.” (*Boyce et al.*, Col. 9, lines 60-65.) In contrast to a downscaler that stores frames to memory, claim 38 recites “downscaling the video picture in transit to the display device”.

Since the proposed combination does not teach at least the above-described features recited in claim 38, a *prima facie* case establishing an obviousness rejection has not been made. Thus, claim 38 is not obvious under the proposed combination of *MacInnis et al.* in view of *Boyce et al.* and further in view of *Kalra et al.*, and the rejection should be withdrawn.

2) The proposed combination does not teach “a method implemented in a digital home communication terminal (DHCT)...comprising: determining whether a resource-constrained mode is to be initiated” as recited in claim 38

The Office Action alleges that *Kalra et al.* teaches these features in Col. 17, lines 25-55. (Office Action, p. 3.) Applicants respectfully disagree. The cited portion of *Kalra et al.* discloses “CPU constraints” and “bandwidth constraints” as described below:

Step 1: Bandwidth Constraint

The profile from the client indicates that BW.sub.NET = 500 Kbps and PREF.sub.AV = 0.75. Using the function .function(.) illustrated in FIG. 16A1 that determines the ratio of bandwidths to be allocated to video and audio: This determines the bandwidths allocated to video: Selecting all the adaptive streams that satisfy the bandwidth constraint for video, the set of adaptive streams highlighted in FIG. 15B2B can be used.

Step 2: CPU Constraint

The Step 2 CPU constraint uses the functions illustrated in FIG. 16A3 and thus it is required to a) Calculate ADR (audio decode ratio)  $ADR = T_{\text{sub.A}} / T_{\text{sub.A-LCD}}$ , where  $T_{\text{sub.A-LCD}}$  is the audio decode time per sample for the LCD (least common denominator) platform. b) Determine  $CPUR_{\text{sub.A}}$  by using the above computed value of ADR and the curve specified by  $PREF_{\text{sub.AV}}$ .

(*Kalra et al.*, Col. 17, lines 10-35.)

However, *Kalra et al.* further discloses that these two steps are applied by the server rather than the client: “attention is directed to the flowchart in FIG. 15B1 which indicates the steps that the server takes to determine which of the particular streams to transmit” (*Kalra et al.*, Col. 16, lines 50-52). In contrast, claim 38 recites “a method implemented in a digital home communication terminal (DHCT)” such that “determining whether a resource-constrained mode is to be initiated” is performed by the DHCT.

The Office Action admits that “*MacInnis et al.* does not seem to particularly disclose determining whether a resource constrained mode is to be initiated, and responsive to determining that the resource constrained mode is to be initiated, initiating the resource constraint mode”. (Office Action, p. 3.) Finally, Applicant finds no discussion of “a resource-constrained mode” in the last reference, *Boyce et al.*

Since the proposed combination does not teach at least the above-described features recited in claims 53 and 54, a *prima facie* case establishing an obviousness rejection has not been made. Thus, claim 38 is not obvious under the proposed combination of *MacInnis et al.* in view of *Boyce et al.* and further in view of *Kalra et al.*, and the rejection should be withdrawn.

#### B. Claims 53 and 54

1) The proposed combination does not teach “transferring the retrieved set of decoded pictures to a display device while scaling the pictures in transit to the display device to a second spatial resolution without storing the pictures in the memory component” as recited in claim 53 or “logic configured to transfer the set of decoded pictures to a display device while scaling the pictures in transit to the display device to a second spatial resolution without storing the pictures in the memory component” as recited in claim 54

The Office Action alleges that these features are disclosed by *MacInnis et al.* in Col. 5, lines 65-67, Col. 6, lines 1-9, and Figure 2, block 52. (Office Action, p. 3.) Applicants respectfully disagree. *MacInnis et al.* teaches:

The video scaler 52 may perform both downscaling and upscaling of digital video and analog video as needed. In the preferred embodiment, scale factors may be adjusted continuously from a scale factor of much less than one to a scale factor of four. With both analog and digital video input, either one may be scaled while the other is displayed full size at the same time as passthrough video. Any portion of the input may be the source for video scaling. To conserve memory and bandwidth, the video scaler preferably downscales before capturing video frames to memory, and upscales after reading from memory, but preferably does not perform both upscaling and downscaling at the same time. (*MacInnis et al.*, Col. 5, line 65 to Col. 6, line 9, Emphasis added.)

In contrast to a downscaler that stores frames to memory, claim 53 recites “downscaling the video picture in transit to the display device to a second spatial resolution without storing the pictures in the memory component” and claim 54 recites “logic configured to downscale the video picture in transit to the display device to a second spatial resolution without storing the pictures in the memory component”.

*Kalra et al.* contains no discussion at all of “downscaling”. *Boyce et al.* refers to downsampling rather than downscaling. Even assuming, *arguendo*, that downsampling is the same as downscaling, *Boyce et al.* further teaches that video frames are stored to memory after downscaling: “The output of the IDCT circuit 124 is coupled to the input of the downsampler 126. The downsampler 126 is used to downsample the data corresponding to each picture prior to storage in the frame buffer 118. As a result of the downsampling operation, the amount of data required to represent a video frame is substantially reduced.” (*Boyce et al.*, Col. 9, lines 60-65.) In contrast to a downscaler that stores frames to memory, claim 53 recites “downscaling the video picture in transit to the display device to a second spatial resolution without storing the pictures in the memory component” and claim 54 recites “logic configured to downscale the video picture in transit to the display device to a second spatial resolution without storing the pictures in the memory component”.

Since the proposed combination does not teach at least the above-described features recited in claims 53 and 54, a *prima facie* case establishing an obviousness rejection has not been made. Thus, claims 53 and 54 are not obvious under the proposed combination of *MacInnis et al.* in view of *Boyce et al.* and further in view of *Kalra et al.*, and the rejection should be withdrawn.

2) The proposed combination does not teach “A method implemented in a digital home communication terminal (DHCT)...comprising determining whether a resource-constrained mode is to be initiated” as recited in claim 53 or “A digital home communication terminal (DHCT) comprising: logic configured to determine whether a resource-constrained mode is to be initiated” as recited in claim 54

The Office Action alleges that *Kalra et al.* teaches these features in Col. 17, lines 25-55. (Office Action, p. 3.) Applicants respectfully disagree.

This portion of *Kalra et al.* discloses “CPU constraints” and “bandwidth constraints” as described below:

Step 1: Bandwidth Constraint

The profile from the client indicates that  $BW.sub.NET = 500$  Kbps and  $PREF.sub.AV = 0.75$ . Using the function `.function()` illustrated in FIG. 16A1 that determines the ratio of bandwidths to be allocated to video and audio: This determines the bandwidths allocated to video: Selecting all the adaptive streams that satisfy the bandwidth constraint for video, the set of adaptive streams highlighted in FIG. 15B2B can be used.

Step 2: CPU Constraint

The Step 2 CPU constraint uses the functions illustrated in FIG. 16A3 and thus it is required to a) Calculate ADR (audio decode ratio)  $ADR = T.sub.A / T.sub.A-LCD$ , where  $T.sub.A-LCD$  is the audio decode time per sample for the LCD (least common denominator) platform. b) Determine  $CPUR.sub.A$  by using the above computed value of ADR and the curve specified by  $PREF.sub.AV$ .

(*Kalra et al.*, Col. 17, lines 10-35.)

However, *Kalra et al.* further discloses that these two steps are applied by the server rather than the client: “attention is directed to the flowchart in FIG. 15B1 which indicates the steps that the server takes to determine which of the particular streams to transmit” (*Kalra et al.*, Col. 16, lines 50-52). In contrast, claim 53 recites “a method implemented in a digital home communication terminal (DHCT)” such that “determining whether a resource-constrained mode is to be initiated” is performed by the DHCT. Claim 54 recites “a digital home communication terminal (DHCT) comprising: logic configured to determine whether a resource-constrained mode is to be initiated”.

The Office Action admits that “*MacInnis et al.* does not seem to particularly disclose determining whether a resource constrained mode is to be initiated, and responsive to determining that the resource constrained mode is to be initiated, initiating the resource

constraint mode". (Office Action, p. 3.) Finally, Applicants find no discussion of "a resource-constrained mode" in the last reference, *Boyce et al.*

Since the proposed combination does not teach at least the above-described features recited in claims 53 and 54, a *prima facie* case establishing an obviousness rejection has not been made. Thus, claims 53 and 54 are not obvious under the proposed combination of *MacInnis et al.* in view of *Boyce et al.* and further in view of *Kalra et al.*, and the rejection should be withdrawn.

C. Claims 71-73, 75-77, and 79-81

Since independent claims 38, 53, and 54 are allowable, Applicants respectfully submit that claims 71-73, 75-77, and 79-81 are allowable for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicants respectfully request that the rejection of claims 71-73, 75-77, and 79-81 be withdrawn.

3. Rejection of Claims 55, 66, 68-70, and 83-84 under 35 U.S.C. §103

Claims 55, 66, 68-70, and 83-84 have been rejected under §103(a) as allegedly being obvious over *MacInnis et al.* (6,570,579) in view of *Kalra et al.* (5,953,506). Applicants respectfully traverse this rejection. It is well established at law that, for a proper rejection of a claim under 35 U.S.C. §103 as being obvious based upon a combination of references, the cited combination of references must disclose, teach, or suggest, either implicitly or explicitly, all elements/features/steps of the claim at issue. See, e.g., *In re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988); *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981).

A. Claims 55 and 66

1) The proposed combination does not teach "transferring the retrieved video data to a display device while downscaling the video picture in transit to the display device" as recited in claims 55 and 66

The Office Action alleges that this feature is disclosed by *MacInnis et al.* in Col. 5, lines 65-67, Col. 6, lines 1-9, and Figure 2, block 52. (Office Action, p. 6.) Applicants respectfully disagree. *MacInnis et al.* teaches:

The video scaler 52 may perform both downscaling and upscaling of digital video and analog video as needed. In the preferred embodiment, scale factors may be adjusted continuously from a scale factor of much less than one to a scale factor of four. With

both analog and digital video input, either one may be scaled while the other is displayed full size at the same time as passthrough video. Any portion of the input may be the source for video scaling. To conserve memory and bandwidth, the video scaler preferably downscales before capturing video frames to memory, and upscales after reading from memory, but preferably does not perform both upscaling and downscaling at the same time. (*MacInnis et al.*, Col. 5, line 65 to Col. 6, line 9, Emphasis added.)

In contrast to a downscaler that stores frames to memory, claims 55 and 66 recite “downscaling the video picture in transit to the display device”.

*Kalra et al.* contains no discussion at all of “downscaling”. Since the proposed combination does not teach at least the above-described features recited in claims 55 and 66, a *prima facie* case establishing an obviousness rejection has not been made. Thus, claims 55 and 66 are not obvious under the proposed combination of *MacInnis et al.* in view of *Kalra et al.*, and the rejection should be withdrawn.

2) The proposed combination does not teach “A method implemented in a digital home communication terminal (DHCT)...comprising: determining whether a resource-constrained mode is to be initiated” as recited in claim 55 or “A computer readable medium containing a program for use in a digital home communication terminal (DHCT) comprising...determining whether a resource-constrained mode is to be initiated” as recited in claim 66

The Office Action alleges that *Kalra et al.* teaches these features in Col. 17, lines 25-55. (Office Action, p. 6.) Applicants respectfully disagree. This portion of *Kalra et al.* discloses “CPU constraints” and “bandwidth constraints” as described below:

Step 1: Bandwidth Constraint

The profile from the client indicates that BW.sub.NET =500 Kbps and PREF.sub.AV =0.75. Using the function .function.() illustrated in FIG. 16A1 that determines the ratio of bandwidths to be allocated to video and audio: This determines the bandwidths allocated to video: Selecting all the adaptive streams that satisfy the bandwidth constraint for video, the set of adaptive streams highlighted in FIG. 15B2B can be used.

Step 2: CPU Constraint

The Step 2 CPU constraint uses the functions illustrated in FIG. 16A3 and thus it is required to a) Calculate ADR (audio decode ratio)  $ADR=T.sub.A / T.sub.A-LCD$ , where T.sub.A-LCD is the audio decode time per sample for the LCD (least common denominator) platform. b) Determine CPUR.sub.A by using the above computed value of ADR and the curve specified by

PREF.sub.AV.  
(*Kalra et al.*, Col. 17, lines 10-35.)

However, *Kalra et al.* further discloses that these two steps are applied by the server rather than the client: “attention is directed to the flowchart in FIG. 15B1 which indicates the steps that the server takes to determine which of the particular streams to transmit” (*Kalra et al.*, Col. 16, lines 50-52). In contrast, claim 55 recites “a method implemented in a digital home communication terminal (DHCT)” such that “determining whether a resource-constrained mode is to be initiated” is performed by the DHCT. Claim 66 recites “a computer readable medium containing a program for use in a digital home communication terminal (DHCT)” such that “determining whether a resource-constrained mode is to be initiated” is performed by the DHCT.

The Office Action admits that “*MacInnis et al.* does not seem to particularly disclose determining whether a resource constrained mode is to be initiated, and responsive to determining that the resource constrained mode is to be initiated, initiating the resource constraint mode”. (Office Action, p. 6.) Since the proposed combination does not disclose, teach, or suggest at least the above-described features recited in claims 55 and 66, a *prima facie* case establishing an obviousness rejection has not been made. Thus, claims 55 and 66 are not obvious under the proposed combination of *MacInnis et al.* in view of *Kalra et al.*, and the rejection should be withdrawn.

B. Claims 68-70 and 83-84

Since independent claims 55 and 66 are allowable, Applicants respectfully submit that claims 68-70 and 83-84 are allowable for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicants respectfully request that the rejection of claims 68-70 and 83-84 be withdrawn.

4. Rejection of Claims 67, 74, 78, and 82 under 35 U.S.C. §103

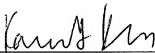
Claims 67, 74, 78, and 82 have been rejected under §103(a) as allegedly being obvious over *MacInnis et al.* (6,570,579) in view of *Kalra et al.* (5,953,506) and *Boyce et al.* (5,614,952). Applicants respectfully traverse this rejection. Since claims 53, 54, 55, and 66 are allowable, Applicants respectfully submit that claims 67, 74, 78, and 82 are allowable for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicants respectfully request that the rejection of claims 67, 74, 78, and 82 be withdrawn.



**CONCLUSION**

Applicants respectfully request that all outstanding objections and rejections be withdrawn and that this application and presently pending claims 38, 53-55, and 66-84 be allowed to issue. Any statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Furthermore, any and all findings of well-known art and official notice, or statements interpreted similarly, should not be considered well known since the Office Action does not include specific factual findings predicated on sound technical and scientific reasoning to support such conclusions. If the Examiner has any questions or comments regarding Applicants' response, the Examiner is encouraged to telephone Applicants' undersigned counsel.

Respectfully submitted,

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